

INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION

(PTO-1449)



ATTY. DOCKET NO.
5918/FPS/MMCS/APC/DV

SERIAL NO.
09/943,955

RECEIVED

AUG 01 2002

Technology Center 2100

APPLICANT
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

GROUP
2122

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
LTUE	4,796,194	01/03/89	Atherton			08/20/86
LTUE	5,089,970	02/18/92	Lee et al.			10/05/89
LTUE	5,108,570	04/28/92	Wang			03/30/90
LTUE	5,220,517	06/15/93	Sierk et al.			08/31/90
LTUE	5,236,868	08/17/93	Nulman			04/20/90
LTUE	5,260,868	11/09/93	Gupta et al.			10/15/91
LTUE	5,295,242	03/15/94	Mashruwala et al.			11/02/90
LTUE	5,309,221	05/03/94	Fischer et al.			12/31/91
LTUE	5,329,463	07/12/94	Sierk et al.			01/13/93
LTUE	5,367,624	11/22/94	Cooper			06/11/93
LTUE	5,398,336	03/14/95	Tantry et al.			06/16/93
LTUE	5,402,367	03/28/95	Sullivan et al.			07/19/93
LTUE	5,408,405	04/18/95	Mozumder et al.			09/20/93
LTUE	5,410,473	04/25/95	Kaneko et al.			12/16/92

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
LTUE	01-283934	11/15/89	Japan			X	
LTUE	2,050,247	08/29/91	Canada			X	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

LTUE	Dishon, G., D. Eylon, M. Finarov, and A. Shulman. "Dielectric CMP Advanced Process Control Based on Integrated Monitoring." Ltd. Rehoveth, Israel: Nova Measuring Instruments. <i>no date</i>
LTUE	Runyan, W. R., and K. E. Bean. 1990. "Semiconductor Integrated Circuit Processing Technology." pg. 48. Reading, Massachusetts: Addison-Wesley Publishing Company.

EXAMINER

/Lynette Umez Eronini/

DATE CONSIDERED
(09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION

(PTO-1449)



ATTY. DOCKET NO.
5918/FPS/MMCS/APC/DV

SERIAL NO.
09/943,955

RECEIVED

AUG 01 2002

Technology Center 2100

APPLICANT
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

GROUP
2122

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
LTUE	5,490,097	02/06/96	Swenson et al.			08/06/93
LTUE	5,495,417	02/27/96	Fuduka et al.			03/16/93
LTUE	5,497,316	03/05/96	Sierk et al.			04/04/95
LTUE	5,503,707	04/02/96	Maung et al.			09/22/93
LTUE	5,508,947	04/16/96	Sierk et al.			05/13/94
LTUE	5,629,216	05/13/97	Wijaranakula et al.			02/27/96
LTUE	5,657,254	08/12/97	Sierk et al.			04/15/96
LTUE	5,661,669	08/26/97	Mozumder et al.			06/07/95
LTUE	5,694,325	12/02/97	Fukuda et al.			11/22/95
LTUE	5,698,989	12/16/97	Nulman			09/13/96
LTUE	5,719,495	02/17/98	Moslehi			06/05/96
LTUE	5,740,429	04/14/98	Wang et al.			07/07/95
LTUE	5,751,582	05/12/98	Saxena et al.			09/24/96
LTUE	5,754,297	05/19/98	Nulman			04/14/97
LTUE	5,764,543	06/09/98	Kennedy			06/16/95

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
LTUE	2,165,847	08/29/91	Canada			X	
LTUE	2,194,855	08/29/91	Canada			X	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

LTUE	Zorich, Robert. 1991. <i>Handbook of Quality Integrated Circuit Manufacturing</i> . pp. 464-498 San Diego, California: Academic Press, Inc.
LTUE	Rampalli, Prasad, Arakere Ramesh, and Nimish Shah. 1991. <i>CEPT—A Computer-Aided Manufacturing Application for Managing Equipment Reliability and Availability in the Semiconductor Industry</i> . New York, New York: IEEE.


EXAMINER

/Lynette Umez Eronini/

DATE CONSIDERED

(09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)				ATTY. DOCKET NO. 5918/FPS/MMCS/APC/DV		SERIAL NO. 09/943,955 RECEIVED AUG 01 2002	
				APPLICANT SHANMUGASUNDRAM et al. Technology Center 2100			
				FILING DATE August 31, 2001		GROUP 2122	
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
LTUE	5,808,303	09/15/98	Schlagheck et al.			01/29/97	
LTUE	5,838,595	11/17/98	Sullivan et al.			11/25/96	
LTUE	5,883,437	03/16/99	Maruyama et al.			12/28/95	
LTUE	5,910,011	06/08/99	Cruse			05/12/97	
LTUE	6,054,379	04/25/00	Yau et al.			02/11/98	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation Yes No	
LTUE	05-151231	06/18/93	Japan				X
LTUE	05-216896	08/27/93	Japan				X
LTUE	05-266029	10/15/93	Japan				X
LTUE	06-110894	04/22/94	Japan				X
LTUE	06-176994	06/24/94	Japan				X
LTUE	06-252236	09/09/94	Japan				X
LTUE	06-260380	09/16/94	Japan				X
LTUE	08-149583	06/07/96	Japan			X	
LTUE	09-34535	02/07/97	Japan			X	
LTUE	EP 0877308 A2	11/11/98	Europe			X	
LTUE	11-67853	03/09/99	Japan			X	
LTUE	1072967A3	11/21/01	Europe			X	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
LTUE	Moyne, James R., Nauman Chaudhry, and Roland Telfeyan. 1995. "Adaptive Extensions to a Multi-Branch Run-to-Run Controller for Plasma Etching." <i>Journal of Vacuum Science and Technology</i> . Ann Arbor, Michigan: University of Michigan Display Technology Manufacturing Center.						
LTUE	Moyne, James, Roland Telfeyan, Arnon Hurwitz, and John Taylor. August 1995. "A Process-Independent Run-to-Run Controller and Its Application to Chemical-Mechanical Planarization." <i>SEMI/IEEE Advanced Semiconductor Manufacturing Conference and Workshop</i> . Ann Arbor, Michigan: The University of Michigan, Electrical Engineering & Computer Science Center for Display Technology & Manufacturing.						
EXAMINER				DATE CONSIDERED			
/Lynette Umez Eronini/				(09/07/2006)			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

**INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION**



(PTO-1449)

ATTY. DOCKET NO.
5918/FPS/MMCS/APC/DV

SERIAL NO.
09/943,955

RECEIVED

AUG 01 2002

Technology Center 2100

APPLICANT
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

GROUP
2122

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT APPLICATION NO.	FILING DATE	NAME	TITLE	CLASS	SUB- CLASS
LTUE	09/363,966	07/29/99	Arackaparambil et al.	Computer Integrated Manufacturing Techniques		
LTUE	09/469,227	12/22/99	Somekh et al.	Multi-Tool Control System, Method and Medium		
LTUE	09/619,044	07/19/00	Yuan	System and Method of Exporting or Importing Object Data in a Manufacturing Execution System		
LTUE	09/637,620	08/11/00	Chi et al.	Generic Interface Builder		
LTUE	09/656,031	09/06/00	Chi et al.	Dispatching Component for Associating Manufacturing Facility Service Requestors with Service Providers		

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	Translation
						Yes No

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

LTUE	Zhou, Zhen-Hong and Rafael Reif. August 1995. "Epi-Film Thickness Measurements Using Emission Fourier Transform Infrared Spectroscopy—Part II: Real-Time <i>in Situ</i> Process Monitoring and Control." IEEE Transactions on Semiconductor Manufacturing, Vol. 8, No. 3.
LTUE	Telfeyan, Roland, James Moyne, Nauman Chaudhry, James Pugmire, Scott Shellman, Duane Boning, William Moyne, Arnon Hurwitz, and John Taylor. October 1995. "A Multi-Level Approach to the Control of a Chemical-Mechanical Planarization Process." Minneapolis, Minnesota: 42 nd National Symposium of the American Vacuum Society.
LTUE	Chang, E., B. Stine, T. Maung, R. Divecha, D. Boning, J. Chung, K. Chang, G. Ray, D. Bradbury, O. S. Nakagawa, S. Oh, and D. Bartelink. December 1995. "Using a Statistical Metrology Framework to Identify Systematic and Random Sources of Die- and Wafer-level ILD Thickness Variation in CMP Processes." Washington, D.C.: International Electron Devices Meeting.

EXAMINER

DATE CONSIDERED

/Lynette Umez Eronini/ (09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

**INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION**

(PTO-1449)



ATTY. DOCKET NO.
5918/FPS/MMCS/APC/DV

SERIAL NO.
09/943,955

RECEIVED**AUG 01 2002**

Technology Center 2100

APPLICANT
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

GROUP
2122

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT APPLICATION NO.	FILING DATE	NAME	TITLE	CLASS	SUB- CLASS
LTUE	09/655,542	09/06/00	Yuan	System, Method and Medium for Defining Palettes to Transform an Application Program Interface for a Service		
LTUE	09/725,908	11/30/00	Chi et al.	Dynamic Subject Information Generation in Message Services of Distributed Object Systems		
LTUE	09/800,980	03/08/01	Hawkins et al.	Dynamic and Extensible Task Guide		
LTUE	09/811,667	03/20/01	Yuan et al.	Fault Tolerant and Automated Computer Software Workflow		
LTUE	09/927,444	08/13/01	Ward et al.	Dynamic Control of Wafer Processing Paths in Semiconductor Manufacturing Processes		
LTUE	09/928,473	08/14/01	Koh	Tool Services Layer for Providing Tool Service Functions in Conjunction with Tool Functions		

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	Translation
						Yes No

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

LTUE	Dishon, G., M. Finarov, R. Kipper, J.W. Curry, T. Schraub, D. Trojan, 4 th Stambaugh, Y. Li and J. Ben-Jacob. February 1996. "On-Line Integrated Metrology for CMP Processing." Santa Clara, California: VMIC Speciality Conferences, 1 st International CMP Planarization Conference.
LTUE	Smith, Taber, Duane Boning, James Moyne, Arnon Hurwitz, and John Curry. June 1996. "Compensating for CMP Pad Wear Using Run by Run Feedback Control." Santa Clara, California: VLSI Multilevel Interconnect Conference.
LTUE	Boning, Duane, William Moyne, Taber Smith, James Moyne, Roland Telfeyan, Arnon Hurwitz, Scott Shellman, and John Taylor. October 1996. "Run by Run Control of Chemical-Mechanical Polishing." <i>IEEE Trans. CPMT (C)</i> , Vol. 19, No. 4, pp. 307-314.
LTUE	SEMI. [1986] 1996. "Standard for Definition and Measurement of Equipment Reliability, Availability, and Maintainability (RAM)." SEMI E10-96.

EXAMINER

/Lynette Umez Eronini/

DATE CONSIDERED

(09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION
(PTO-1449)



ATTY. DOCKET NO.
5918/FPS/MMCS/APC/DV

SERIAL NO.
09/943,955

RECEIVED

AUG 01 2002

APPLICANT
SHANMUGASUNDRAM et al.

Technology Center 2100

FILING DATE
August 31, 2001

GROUP
2122

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT APPLICATION NO.	FILING DATE	NAME	TITLE	CLASS	SUB- CLASS
LTUE	09/928,474	08/14/01	Krishnamurthy et al.	Experiment Management System, Method and Medium		

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	Translation
						Yes No

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)


LTUE	Van Zant, Peter. 1997. <i>Microchip Fabrication: A Practical Guide to Semiconductor Processing</i> . Third Edition. pp. 472-478. New York, New York: McGraw-Hill.
LTUE	Campbell, W. Jarrett, and Anthony J. Toprac. February 11-12, 1998. "Run-to-Run Control in Microelectronics Manufacturing." <i>Advanced Micro Devices, TWMCC</i> .
LTUE	Edgar, Thomas F., Stephanie W. Butler, Jarrett Campbell, Carlos Pfeiffer, Chris Bode, Sung Bo Hwang, and K.S. Balakrishnan. May 1998. "Automatic Control in Microelectronics Manufacturing: Practices, Challenges, and Possibilities." <i>Automatica</i> , Vol. 36, pp. 1567-1603, 2000.
LTUE	Moyne, James, and John Curry. June 1998. "A Fully Automated Chemical-Mechanical Planarization Process." Santa Clara, California: VLSI Multilevel Interconnection (V-MIC) Conference.
LTUE	SEMI. July 1998. <i>New Standard: Provisional Specification for CIM Framework Domain Architecture</i> . Mountain View, California: SEMI Standards. SEMI Draft Doc. 2817.
LTUE	Consilium. August 1998. <i>Quality Management Component: QMC™ and QMC-Link™ Overview</i> . Mountain View, California: Consilium, Inc.
LTUE	Chemali, Chadi El, James Moyne, Kareemullah Khan, Rock Nadeau, Paul Smith, John Colt, Jonathan Chapple-Sokol, and Tarun Parikh. November 1998. "Multizone Uniformity Control of a CMP Process Utilizing a Pre and Post-Measurement Strategy." Seattle, Washington: SEMETECH Symposium.
LTUE	Consilium. 1998. <i>FAB300™</i> . Mountain View, California: Consilium, Inc.
LTUE	Khan, Kareemullah, Victor Solakhain, Anthony Ricci, Tier Gu, and James Moyne. 1998. "Run-to-Run Control of ITO Deposition Process." Ann Arbor, Michigan.

EXAMINER

DATE CONSIDERED

/Lynette Umez Eronini/ (09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)				ATTY. DOCKET NO. 5918/FPS/MMCS/APC/DV		SERIAL NO. 09/943,955	
				RECEIVED AUG 01 2002			
				APPLICANT SHANMUGASUNDRAM et al. Technology Center 2100			
				FILING DATE August 31, 2001		GROUP 2122	
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT APPLICATION NO.	FILING DATE	NAME	TITLE	CLASS	SUB- CLASS	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	Translation Yes No	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
LTUE	Consilium. January 1999. "FAB300™: Consilium's Next Generation MES Solution of Software and Services which Control and Automate Real-Time FAB Operations." www.consilium.com/products/fab300_page.htm#FAB300 Introduction						
LTUE	Consilium. July 1999. "Increasing Overall Equipment Effectiveness (OEE) in Fab Manufacturing by Implementing Consilium's Next-Generation Manufacturing Execution System - MES II." Semiconductor Fabtech Edition 10.						
LTUE	Consilium Corporate Brochure. October 1999. www.consilium.com						
LTUE	Moyne, James. October 1999. "Advancements in CMP Process Automation and Control." Hawaii: (Invited paper and presentation to) Third International Symposium on Chemical Mechanical Polishing in IC Device Manufacturing: 196 th Meeting of the Electrochemical Society.						
LTUE	Consilium. November 1999. <i>FAB300™ Update</i> .						
LTUE	SEMI. 2000. "Provisional Specification for CIM Framework Scheduling Component." San Jose, California. SEMI E105-1000.						
LTUE	Lee, Brian, Duane S. Boning, Winthrop Baylies, Noel Poduje, Pat Hester, Yong Xia, John Valley, Chris Koliopoulus, Dale Hetherington, HongJiang Sun, and Michael Lacy. April 2001. "Wafer Nanotopography Effects on CMP: Experimental Validation of Modeling Methods." San Francisco, California: Materials Research Society Spring Meeting.						
LTUE	NovaScan 2020. February 2002. "Superior Integrated Process Control for Emerging CMP High-End Applications."						
EXAMINER <div style="display: flex; justify-content: space-between;"> /Lynette Umez Eronini/ DATE CONSIDERED (09/07/2006) </div>							

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

**INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION**

(PTO-1449)

ATTY. DOCKET NO.
5918/FPS/MMCS/APC/DV

SERIAL NO.
09/942,955

RECEIVED

SEP 20 2002

Technology Center 2100

APPLICANT
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

GROUP
2122

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
LTUE	4,698,766	10/06/87	Entwistle et al.			05/17/85
LTUE	4,967,381	10/30/90	Lane et al.			07/06/89
LTUE	5,208,765	05/04/93	Turnbull			07/20/90
LTUE	5,226,118	07/06/93	Baker et al.			01/29/91
LTUE	5,231,585	07/27/93	Kobayashi et al.			06/20/90
LTUE	5,420,796	05/30/95	Weling et al.			12/23/93
LTUE	5,469,361	11/21/95	Moyne			06/06/94
LTUE	5,525,808	06/11/96	Irie et al.			12/20/94
LTUE	5,586,039	12/17/96	Hirsch et al.			02/27/95
LTUE	5,603,707	02/18/97	Trombetta et al.			11/28/95
LTUE	5,664,987	09/09/97	Renteln			09/04/96
LTUE	5,812,407	09/22/98	Sato et al.			08/12/97
LTUE	5,828,778	10/27/98	Hagi et al.			06/12/96
LTUE	5,832,224	11/03/98	Fehskens et al.			06/14/96

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
LTUE	61-171147	08/01/86	Japan				X
LTUE	6-184434	07/05/94	Japan				X
LTUE	0 621 522 A2	10/26/94	Europe			X	
LTUE	8-50161	02/20/96	Japan				X
LTUE	8-304023	11/22/96	Japan				X

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

LTUE	February 1984. "Method and Apparatus of in Situ Measurement and Overlay Error Analysis for Correcting Step and Repeat Lithographic Cameras." <i>IBM Technical Disclosure Bulletin</i> , pp. 4855-4859.
LTUE	October 1984. "Method to Characterize the Stability of a Step and Repeat Lithographic System." <i>IBM Technical Disclosure Bulletin</i> , pp. 2857-2860.

EXAMINER

DATE CONSIDERED

/Lynette Umez Eronini/ (09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

**INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION**

(PTO-1449)

ATTY. DOCKET NO.
5918/FPS/MMCS/APC/DV

SERIAL NO.
09/943,955

APPLICANT
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

GROUP
2122

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
LTUE	5,859,964	01/12/99	Wang et al.			10/25/96
LTUE	5,863,807	01/26/99	Jang et al.			03/15/96
LTUE	5,870,306	02/09/99	Harada			06/13/97
LTUE	5,903,455	05/11/99	Sharpe, Jr. et al.			12/12/96
LTUE	5,916,016	06/29/99	Bothra			10/23/97
LTUE	5,923,553	07/13/99	Yi			10/05/96
LTUE	5,930,138	07/27/99	Lin et al.			09/10/97
LTUE	5,940,300	08/17/99	Ozaki			05/08/97
LTUE	5,960,214	09/28/99	Sharpe, Jr. et al.			12/04/96
LTUE	5,963,881	10/05/99	Kahn et al.			10/20/97
LTUE	5,982,920	11/09/99	Tobin, Jr. et al.			01/08/97
LTUE	6,041,270	03/21/00	Steffan et al.			12/05/97
LTUE	6,078,845	06/20/00	Friedman			11/25/96
LTUE	6,112,130	08/29/00	Fukuda et al.			10/01/97
LTUE	6,148,246	11/14/00	Kawazome			06/10/98

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
LTUE	0 747 795 A2	12/11/96	Europe			X	
LTUE	10-173029	06/26/98	Japan				X
LTUE	0 895 145 A1	02/03/99	Europe			X	
LTUE	11-126816	05/11/99	Japan				X

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

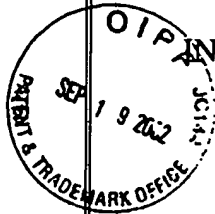
LTUE	Schmid, Hans Albrecht. 1995. "Creating the Architecture of a Manufacturing Framework by Design Patterns." Austin, Texas: OOPSLA.
LTUE	Baliga, John. July 1999. "Advanced Process Control: Soon to be a Must." Cahners Semiconductor International. www.semiconductor.net/semiconductor/issues/issues/1999/jul99/docs/feature1.asp

EXAMINER

/Lynette Umez Eronini/

DATE CONSIDERED
(09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



**INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION
(PTO-1449)**

ATTY. DOCKET NO.
5918/FPS/MMCS/APC/DV

SERIAL NO.
09/943,955

RECEIVED
SEP 20 2002

APPLICANT **Technology Center 2100**
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

GROUP
2122

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
LTUE	6,175,777	01/16/01	Kim			01/16/98
LTUE	6,178,390	01/23/01	Jun			09/08/98
LTUE	6,185,324	02/06/01	Ishihara et al.			01/31/95
LTUE	6,192,291	02/20/01	Kwon			10/08/98
LTUE	6,197,604	03/06/01	Miller et al.			10/01/98
LTUE	6,211,094	04/03/01	Jun et al.			08/23/99
LTUE	6,226,792	05/01/01	Goiffon et al.			10/14/98
LTUE	6,230,069	05/08/01	Campbell et al.			06/26/98
LTUE	6,236,903	05/22/01	Kim et al.			09/25/98
LTUE	6,240,330	05/29/01	Kurtzberg et al.			05/28/97

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
LTUE	11-135601	05/21/99	Japan				X
LTUE	WO 00/05759	02/03/00	WO			X	
LTUE	WO 00/35063	06/15/00	WO			X	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

LTUE	July 5, 2001. "Motorola and Advanced Micro Devices Buy ObjectSpace Catalyst Advanced Process Control Product for Five Wafer Fabs." Semiconductor FABTECH. www.semiconductorfabtech.com/industry.news/9907/20.07.shtml
LTUE	October 15, 2001. Search Report prepared by the Austrian Patent Office for Singapore Patent Application No. 200004286-1.
LTUE	Johnson, Bob. June 10, 2002. "Advanced Process Control Key to Moore's Law." Gartner, Inc.
LTUE	July 9, 2002. International Search Report prepared by the European Patent Office for PCT/US01/24910.
LTUE	July 29, 2002. International Search Report prepared by the European Patent Office for PCT/US01/27407.
LTUE	Sonderman, Thomas. 2002. "APC as a Competitive Manufacturing Technology: AMD's Vision for 300mm." AEC/APC.

EXAMINER

/Lynette Umez Eronini/

DATE CONSIDERED
(09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



SHEET 4 OF 4

INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION
(PTO-1449)

ATTY. DOCKET NO.
5918/FPS/MMCS/APC/DV

SERIAL NO.
09/943,955

RECEIVED

SEP 20 2002

Technology Center 2100

APPLICANT
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

GROUP
2122

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
LTUE	6,240,331	05/29/01	Yun			08/18/98
LTUE	6,248,602	06/19/01	Bode et al.			11/01/99
LTUE	6,252,412	06/26/01	Talbot et al.			01/08/99
LTUE	6,263,255	07/17/01	Tan et al.			05/18/98
LTUE	6,292,708	09/18/01	Allen et al.			06/11/98
LTUE	6,298,274	10/02/01	Inoue			09/01/99
LTUE	6,303,395	10/16/01	Nulman			06/01/99
LTUE	6,345,315	02/05/02	Mishra			08/12/98
LTUE	6,366,934	04/02/02	Cheng et al.			06/02/99

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
LTUE	WO 00/79355 A1	12/28/00	WO			X	
LTUE	2001-76982	03/23/01	Japan				X
LTUE	WO 01/33501 A1	05/10/01	WO			X	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER	DATE CONSIDERED
/Lynette Umez Eronini/	(09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

(PTO-1449)



ATTY. DOCKET NO.
005918
USA/FPS/MMCS/APC

APPLICANT
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

**GROUP
2122**

[illegible]

03/23/99
RECEIVED
NOV 20 2002
Technology Center 2100

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
LTUE	2 347 885 A	09/20/00	GB			X	
LTUE	WO 01/15865 A1	03/08/01	WO			X	

LTUE	July 23, 2002. Communication Pursuant to Article 96(2) EPC for European Patent Application No. 00 115 577.9.
LTUE	October 15, 2002. International Search Report prepared by the European Patent Office for PCT/US02/19062.

EXAMINER

| DATE CONSIDERED

/Lynette Umez Eronini/ (09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION

(PTO-1449)



ATTY. DOCKET NO.
005918
USA/FPS/MMCS/APC

SERIAL NO.
09/943,955

RECEIVED

JAN 02 2003

APPLICANT
SHANMUGASUNDRAM Technology Center 2100

FILING DATE
August 31, 2001

GROUP
2122

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PUBLICATION / PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
LTUE	5,270,222	12/14/93	Moslehi			12/31/90
LTUE	5,375,064	12/20/94	Bollinger			12/02/93
LTUE	5,599,423	02/04/97	Parker et al.			06/30/95
LTUE	5,844,554	12/01/98	Geller et al.			09/17/96

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PUBLICATION / PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
LTUE	WO 95/34866	12/21/95	WO			X	
LTUE	WO 98/45090	10/15/98	WO			X	
LTUE	EP 0 881 040 A2	12/02/98	Europe			X	
LTUE	WO 99/25520	05/27/99	WO			X	
LTUE	WO 00/54325	09/14/00	WO			X	
LTUE	EP 1 066 925 A2	01/10/01	Europe			X	
LTUE	EP 1 092 505 A2	04/18/01	Europe			X	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

LTUE	Hu, Albert, Kevin Nguyen, Steve Wong, Xiuhua Zhang, Emanuel Sachs, and Peter Renteln. 1993. "Concurrent Deployment of Run by Run Controller Using SCC Framework." IEEE/SEMI International Semiconductor Manufacturing Science Symposium. pp. 126-132.
LTUE	Hu, Albert, He Du, Steve Wong, Peter Renteln, and Emanuel Sachs. 1994. "Application of Run by Run Controller to the Chemical-Mechanical Planarization Process." IEEE/CPMT International Electronics Manufacturing Technology Symposium. pp. 371-378.
LTUE	Smith, Taber, Duane Boning, James Moyne, Arnon Hurwitz, and John Curry. June 1996. "Compensating for CMP Pad Wear Using Run by Run Feedback Control." Proceedings of the Thirteenth International VLSI Multilevel Interconnection Conference. pp. 437-439.
LTUE	Suzuki, Junichi and Yoshikazu Yamamoto. 1998. "Toward the Interoperable Software Design Models: Quartet of UML, XML, DOM and CORBA." Proceedings IEEE International Software Engineering Standards Symposium. pp. 1-10.
LTUE	Klein, Bruce. June 1999. "Application Development: XML Makes Object Models More Useful." Informationweek. pp. 1A-6A.

EXAMINER

/Lynette Umez Eronini/ DATE CONSIDERED (09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION

(PTO-1449)

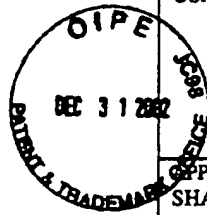
ATTY. DOCKET NO.
005918
USA/FPS/MMCS/APC

SERIAL NO.
09/943,955

RECEIVED

JAN 02 2003

Technology Center 2100



APPLICANT
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

GROUP
2122

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PUBLICATION / PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
LTUE	5,889,991	03/30/99	Consolatti et al.			12/06/96
LTUE	6,183,345 B1	02/06/01	Kamono et al.			03/20/98
LTUE	6,253,366 B1	06/26/01	Mutschler, III			03/31/99
LTUE	6,298,470 B1	10/02/01	Breiner et al.			04/15/99

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PUBLICATION / PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
LTUE	WO 01/52055 A3	07/19/01	WO			X	
LTUE	WO 01/57823 A2	08/09/01	WO			X	
LTUE	EP 1 182 526 A2	02/27/02	Europe			X	
LTUE	WO 02/17150 A1	02/28/02	WO			X	
LTUE	WO 02/33737 A2	04/25/02	WO			X	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

LTUE	Chemali, Chadi El, James Moyne, Kareemullah Khan, Rock Nadeau, Paul Smith, John Colt, Jonathan Chapple-Sokol, and Tarun Parikh. July/August 2000. "Multizone Uniformity Control of a Chemical Mechanical Polishing Process Utilizing a Pre- and Postmeasurement Strategy." J. Vac. Sci. Technol. A, Vol. 18(4), pp. 1287-1296. American Vacuum Society.
LTUE	Jensen, Alan, Peter Renteln, Stephen Jew, Chris Raeder, and Patrick Cheung. June 2001. "Empirical-Based Modeling for Control of CMP Removal Uniformity." Solid State Technology, Vol. 44, No. 6, pp. 101-102, 104, 106. Cowan Publ. Corp.: Washington, D.C.
LTUE	Sarfaty, Moshe, Arulkumar Shanmugasundram, Alexander Schwarm, Joseph Paik, Jimin Zhang, Rong Pan, Martin J. Seamons, Howard Li, Raymond Hung, and Suketu Parikh. April/May 2002. "Advance Process Control Solutions for Semiconductor Manufacturing." IEEE/SEMI Advanced Semiconductor Manufacturing Conference. pp. 101-106.
LTUE	October 4, 2002. International Search Report from PCT/US01/22833.
LTUE	October 23, 2002. International Search Report from PCT/US01/27406.
LTUE	November 7, 2002. International Search Report from PCT/US02/19061.
LTUE	November 11, 2002. International Search Report from PCT/US02/19117.
LTUE	November 12, 2002. International Search Report from PCT/US02/19063.

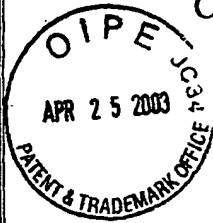
EXAMINER

/Lynette Umez Eronini/

DATE CONSIDERED
(09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)	ATTY. DOCKET NO. 005918 USA/FPS/MMCS/APC	SERIAL NO. 09/943,955
	APPLICANT SHANMUGASUNDRAM et al.	
	FILING DATE August 31, 2001	GROUP 2122



RECEIVED
JUL 24 2003
GROUP 1700

U.S. PATENT DOCUMENTS						
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
LTUE	3,205,485	09/07/65	Noltingk			10/21/60
LTUE	3,229,198	01/11/66	Libby			09/28/62
LTUE	4,000,458	12/28/76	Miller et al.			08/21/75
LTUE	4,302,721	11/24/81	Urbanek et al.			05/15/79
LTUE	4,750,141	06/07/88	Judell et al.			11/26/85
LTUE	4,757,259	07/12/88	Charpentier			11/05/86
LTUE	4,938,600	07/03/90	Into			02/09/89
LTUE	5,283,141	02/01/94	Yoon et al.			03/05/92
LTUE	5,338,630	08/16/94	Yoon et al.			11/18/93
LTUE	5,485,082	01/16/96	Wisspeintner et al.			04/05/90
LTUE	5,497,381	03/05/96	O'Donoghue et al.			06/01/95
LTUE	5,511,005	04/23/96	Abbe et al.			02/16/94
LTUE	5,519,605	05/21/96	Cawlfeld			10/24/94
LTUE	5,526,293	06/11/96	Mozumder et al.			12/17/93
LTUE	5,541,510	06/30/96	Danielson			04/06/95
LTUE	5,546,312	08/13/96	Mozumder et al.			02/24/94
LTUE	5,553,195	09/03/96	Meijer			09/29/94
LTUE	5,602,492	02/11/97	Cresswell et al.			04/28/94
LTUE	5,617,023	04/01/97	Skalski			02/02/95
LTUE	5,627,083	05/06/97	Tounai			05/12/95
LTUE	5,642,296	06/24/97	Saxena			07/29/93
LTUE	5,646,870	07/08/97	Krivokapic et al.			02/13/95
LTUE	5,649,169	07/15/97	Berezin et al.			06/20/95
LTUE	5,654,903	08/05/97	Reitman et al.			11/07/95
LTUE	5,663,797	09/02/97	Sandhu			05/16/96
LTUE	5,665,199	09/09/97	Sahota et al.			06/23/95
LTUE	5,666,297	09/09/97	Britt et al.			05/13/94
EXAMINER			DATE CONSIDERED			
/Lynette Umez Eronini/			(09/07/2006)			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

RECEIVED
JUL 8 2003
GROUP 1700

INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION
(PTO-1449)



ATTY. DOCKET NO.
005918
USA/FPS/MMCS/APC

SERIAL NO.
09/943,955

RECEIVED
JUL 24 2003
GROUP 1700

APPLICANT
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

GROUP
2122

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
LTUE	5,667,424	09/16/97	Pan	RECEIVED APR 28 2003 Technology Center 2100		09/25/96
LTUE	5,674,787	10/07/97	Zhao et al.			01/16/96
LTUE	5,719,796	02/17/98	Chen			12/04/95
LTUE	5,735,055	04/07/98	Hochbein et al.			04/23/96
LTUE	5,761,064	06/02/98	La et al.			10/06/95
LTUE	5,777,901	07/07/98	Berezin et al.			09/29/95
LTUE	5,787,021	07/28/98	Samaha			12/18/95
LTUE	5,787,269	07/28/98	Hyodo			09/19/95
LTUE	5,825,913	10/20/98	Rostami et al.			07/18/95
LTUE	5,857,258	01/12/99	Penzes et al.			05/12/94
LTUE	5,910,846	06/08/99	Sandhu			08/19/97
LTUE	5,943,237	08/24/99	Van Boxem			10/17/97
LTUE	5,960,185	09/28/99	Nguyen			06/24/96
LTUE	5,961,369	10/05/99	Bartels et al.			06/04/98
LTUE	5,978,751	11/02/99	Pence et al.			02/25/97
LTUE	6,017,771	01/25/00	Yang et al.			04/27/98
LTUE	6,036,349	03/14/00	Gombar			07/26/96
LTUE	6,064,759	05/16/00	Buckley et al.			11/06/97
LTUE	6,072,313	06/06/00	Li et al.			06/17/97
LTUE	6,097,887	08/01/00	Hardikar et al.			10/27/97
LTUE	6,108,092	08/22/00	Sandhu			06/08/99
LTUE	6,127,263	10/03/00	Parikh			07/10/98
LTUE	6,136,163	10/24/00	Cheung et al.			03/05/99
LTUE	6,141,660	10/31/00	Bach et al.			07/16/98
LTUE	6,143,646	11/07/00	Wetzel			06/03/97
LTUE	6,148,099	11/14/00	Lee et al.			07/03/97
LTUE	6,148,239	11/14/00	Funk et al.			12/12/97

EXAMINER

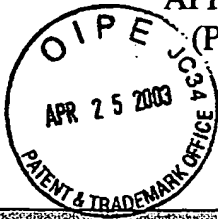
/Lynette Umez Eronini/

DATE CONSIDERED
09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

RECEIVED
JUL 8 2003
GROUP 1700

INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION
(PTO-1449)



ATTY. DOCKET NO.
005918
USA/FPS/MMCS/APC

SERIAL NO.
09/943,955

APPLICANT
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

GROUP
2122

RECEIVED
JUL 24 2003
GROUP 1700

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
LTUE	6,159,075	12/12/00	Zhang			10/13/99
LTUE	6,159,644	12/12/00	Sato et al.			03/06/96
LTUE	6,161,054	12/12/00	Rosenthal et al.			09/17/98
LTUE	6,169,931	01/02/01	Runnels			06/29/98
LTUE	6,172,756	01/09/01	Chalmers et al.			12/11/98
LTUE	6,173,240	01/09/01	Sepulveda et al.			11/02/98
LTUE	6,191,864	02/20/01	Sandhu			02/29/00
LTUE	6,204,165	03/20/01	Ghoshal			06/24/99
LTUE	6,210,983	04/03/01	Atchison et al.			06/15/99
LTUE	6,214,734	04/10/01	Bothra et al.			11/20/98
LTUE	6,217,412	04/17/01	Campbell et al.			08/11/99
LTUE	6,222,936	04/24/01	Phan et al.			09/13/99
LTUE	2001/0001755	05/24/01	Sandhu et al.			12/29/00
LTUE	2001/0003084	06/07/01	Finarov			12/04/00
LTUE	6,246,972	06/12/01	Klimasauskas			05/27/99
LTUE	6,276,989	08/21/01	Campbell et al.			08/11/99
LTUE	6,280,289	08/28/01	Wiswesser et al.			11/02/98
LTUE	6,284,622	09/04/01	Campbell et al.			10/25/99
LTUE	6,287,879	09/11/01	Gonzales et al.			08/11/99
LTUE	6,290,572	09/18/01	Hofmann			03/23/00
LTUE	6,304,999	10/16/01	Toprac et al.			10/23/00
LTUE	2001/0030366	10/18/01	Nakano et al.			03/07/01
LTUE	6,307,628	10/23/01	Lu et al.			08/18/00
LTUE	6,314,379	11/06/01	Hu et al.			12/04/97
LTUE	2001/0039462	11/08/01	Mendez et al.			04/02/01
LTUE	6,320,655	11/20/01	Matsushita et al.			03/15/00

EXAMINER

/Lynette Umez Eronini/

DATE CONSIDERED
(09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

RECEIVED
JUL 30 2003

INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION
(PTO-1449)



ATTY. DOCKET NO.
005918
USA/FPS/MMCS/APC

SERIAL NO.
09/943,955

RECEIVED
JUL 24 2003
GROUP 1700

APPLICANT
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

GROUP
2122

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
LTUE	2001/0042690	11/22/01	Talieh			12/14/00
LTUE	6,324,481	11/27/01	Atchison et al.			06/15/99
LTUE	6,334,807	01/01/02	Lebel et al.			04/30/99
LTUE	6,336,841	01/08/02	Chang			03/29/01
LTUE	2002/0032499	03/14/02	Wilson et al.			05/04/01
LTUE	6,360,133	03/19/02	Campbell et al.			06/17/99
LTUE	6,360,184	03/19/02	Jacquez			03/26/97
LTUE	6,368,883	04/09/02	Bode et al.			08/10/99
LTUE	6,368,884	04/09/02	Goodwin et al.			04/13/00
LTUE	6,379,980	04/30/02	Toprac			07/26/00
LTUE	6,388,253	05/14/02	Su			11/02/00
LTUE	2002/0058460	05/16/02	Lee et al.			09/14/01
LTUE	6,395,152	05/28/02	Wang			07/02/99
LTUE	6,397,114	05/28/02	Eryurek et al.			05/03/99
LTUE	6,405,096	06/11/02	Toprac et al.			08/10/99
LTUE	6,405,144	06/11/02	Toprac et al.			01/18/00
LTUE	2002/0070126	06/13/02	Sato et al.			09/19/01
LTUE	2002/0081951	06/27/02	Boyd et al.			02/20/02
LTUE	2002/0089676	07/11/02	Pecen et al.			04/26/00
LTUE	2002/0102853	08/01/02	Li et al.			12/20/01
LTUE	2002/0107599	08/08/02	Patel et al.			01/25/01
LTUE	6,435,952	08/20/02	Boyd et al.			06/30/00
LTUE	6,438,438	08/20/02	Takagi et al.			01/02/98
LTUE	2002/0113039	08/22/02	Mok et al.			02/16/01
LTUE	6,440,295	08/27/02	Wang			02/04/00
LTUE	2002/0127950	09/12/02	Hirose et al.			03/08/01
LTUE	6,455,937	09/24/02	Cunningham			03/17/99

EXAMINER

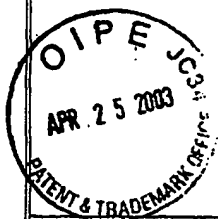
DATE CONSIDERED

/Lynette Umez Eronini/ (09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

RECEIVED
JUL 8 2003
GROUP 1700

**INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION
(PTO-1449)**



ATTY. DOCKET NO.
005918
USA/FPS/MMCS/APC

SERIAL NO.
09/943,955

RECEIVED
JUL 24 2003
GROUP 1700

APPLICANT
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

GROUP
2122

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
LTUE	2002/0149359	10/17/02	Crouzen et al.			08/18/01
LTUE	6,479,902	11/12/02	Lopatin et al.			06/29/00
LTUE	6,479,990	11/12/02	Mednikov et al.			06/18/01
LTUE	2002/0185658	12/12/02	Inoue et al.			06/14/01
LTUE	2002/0193902	12/19/02	Shanmugasundram et al.			06/18/02
LTUE	2002/0197745	12/26/02	Shanmugasundram et al.			08/31/01
LTUE	2002/0197934	12/26/02	Paik			11/30/01
LTUE	2002/0199082	12/26/02	Shanmugasundram et al.			06/18/02
LTUE	6,503,839	01/07/03	Gonzales et al.			07/03/01
LTUE	2003/0020909	01/30/03	Adams et al.			04/09/01
LTUE	2003/0020928	01/30/03	Ritzdorf et al.			07/09/01
	6,517,413	02/11/03	Hu et al.			10/25/00

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
LTUE	61-66104	04/04/86	Japan			X	
LTUE	3-202710	09/04/91	Japan			X	
LTUE	8-23166	01/23/96	Japan			X	
LTUE	9-246547	09/19/97	Japan			X	
LTUE	WO 98/05066	02/05/98	WIPO			X	
LTUE	10-34522	02/10/98	Japan			X	
LTUE	0 869 652	10/07/98	Europe			X	
LTUE	WO 99/09371	02/25/99	WIPO			X	
LTUE	0 910 123	04/21/99	Europe			X	
LTUE	0 932 194	07/28/99	Europe			X	
LTUE	WO 00/00874	01/06/00	WIPO			X	
LTUE	2000-183001	06/30/00	Japan			X	

EXAMINER

DATE CONSIDERED

/Lynette Umez Eronini/ (09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

RECEIVED
JUL 24 2003
GROUP 1700

INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION
(PTO-1449)



ATTY. DOCKET NO.
005918
USA/FPS/MMCS/APC

SERIAL NO.
09/943,955

RECEIVED
JUL 24 2003
GROUP 1700

APPLICANT
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

GROUP
2122

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
LTUE	1 071 128	01/24/01	Europe			X	
LTUE	WO 01/18623	03/15/01	WIPO			X	
LTUE	WO 01/25865	04/12/01	WIPO			X	
LTUE	434103	05/16/01	Taiwan			X	
LTUE	436383	05/28/01	Taiwan			X	
LTUE	455938	09/21/01	Taiwan			X	
LTUE	455976	09/21/01	Taiwan			X	
LTUE	2001-284299	10/12/01	Japan			X	
LTUE	2001-305108	10/31/01	Japan			X	
LTUE	2002-9030	01/11/02	Japan			X	
LTUE	WO 02/074491	09/26/02	WIPO			X	
LTUE	2002-343754	11/29/02	Japan			X	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

LTUE	Ostani, Yu. Ya. October 1981. "Optimization of Thickness Inspection of Electrically Conductive Single-Layer Coatings with Laid-on Eddy-Current Transducers (Abstract)." <i>Defektoskopiya</i> , vol. 17, no. 10, pp. 45-52. Moscow, USSR.
LTUE	February 1984. "Substrate Screening Process." <i>IBM Technical Disclosure Bulletin</i> , pp. 4824-4825.
LTUE	Herrmann, D. 1988. "Temperature Errors and Ways of Elimination for Contactless Measurement of Shaft Vibrations (Abstract)." <i>Technisches Messen</i> TM , vol. 55, no. 1, pp. 27-30. West Germany.
LTUE	Lin, Kuang-Kuo and Costas J. Spanos. November 1990. "Statistical Equipment Modeling for VLSI Manufacturing: An Application for LPCVD." <i>IEEE Transactions on Semiconductor Manufacturing</i> , v. 3, n. 4, pp. 216-229.
LTUE	Chang, Norman H. and Costas J. Spanos. February 1991. "Continuous Equipment Diagnosis Using Evidence Integration: An LPCVD Application." <i>IEEE Transactions on Semiconductor Manufacturing</i> , v. 4, n. 1, pp. 43-51.
LTUE	Larrabee, G. B. May 1991. "The Intelligent Microelectronics Factory of the Future (Abstract)." <i>IEEE/SEMI International Semiconductor Manufacturing Science Symposium</i> , pp. 30-34. Burlingame, CA.
LTUE	Burke, Peter A. June 1991. "Semi-Empirical Modelling of SiO ₂ Chemical-Mechanical Polishing Planarization." <i>VMIC Conference, 1991 IEEE</i> , pp. 379-384. IEEE.

EXAMINER

DATE CONSIDERED

/Lynette Umez Eronini/ (09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

RECEIVED
JUL 24 2003
GROUP 1700

INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION
(PTO-1449)



ATTY. DOCKET NO.

005918

USA/FPS/MIMUSTAPC

SERIAL NO.

09/943,955

RECEIVED
JUL 24 2003
GROUP 1700

RECEIVED

APR 28 2003

APPLICANT
SHANMUGASUNDRAM et al.

Technology Center 2100

FILING DATE

August 31, 2001

GROUP

2122

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

LTUE	May 1992. "Laser Ablation Endpoint Detector." <i>IBM Technical Disclosure Bulletin</i> , pp. 333-334.
LTUE	Spanos, Costas J., Hai-Fang Guo, Alan Miller, and Joanne Levine-Parill. November 1992. "Real-Time Statistical Process Control Using Tool Data." <i>IEEE Transactions on Semiconductor Manufacturing</i> , v. 5, n. 4, pp. 308-318.
LTUE	February 1993. "Electroless Plating Scheme to Hermetically Seal Copper Features." <i>IBM Technical Disclosure Bulletin</i> , pp. 405-406.
LTUE	Scarr, J. M. and J. K. Zelisse. April 1993. "New Topology for Thickness Monitoring Eddy Current Sensors (Abstract)." <i>Proceedings of the 36th Annual Technical Conference</i> , Dallas, Texas.
LTUE	Matsuyama, Akira and Jessi Niou. 1993. "A State-of-the-Art Automation System of an ASIC Wafer Fab in Japan." <i>IEEE/SEMI International Semiconductor Manufacturing Science Symposium</i> , pp. 42-47.
LTUE	Yeh, C. Eugene, John C. Cheng, and Kwan Wong. 1993. "Implementation Challenges of a Feedback Control System for Wafer Fabrication." <i>IEEE/CHMT International Electronics Manufacturing Technology Symposium</i> , pp. 438-442.
LTUE	Kurtzberg, Jerome M. and Menachem Levanoni. January 1994. "ABC: A Better Control for Manufacturing." <i>IBM Journal of Research and Development</i> , v. 38, n. 1, pp. 11-30.
LTUE	Mozumder, Purnendu K. and Gabriel G. Barna. February 1994. "Statistical Feedback Control of a Plasma Etch Process." <i>IEEE Transactions on Semiconductor Manufacturing</i> , v. 7, n. 1, pp. 1-11.
LTUE	Muller-Heinzerling, Thomas, Ulrich Neu, Hans Georg Nurnberg, and Wolfgang May. March 1994. "Recipe-Controlled Operation of Batch Processes with Batch X." <i>ATP Automatisierungstechnische Praxis</i> , vol. 36, no. 3, pp. 43-51.
LTUE	Stoddard, K., P. Crouch, M. Kozicki, and K. Tsakalis. June-July 1994. "Application of Feedforward and Adaptive Feedback Control to Semiconductor Device Manufacturing (Abstract)." <i>Proceedings of 1994 American Control Conference - ACC '94</i> , vol. 1, pp. 892-896. Baltimore, Maryland.
LTUE	Schaper, C. D., M. M. Moslehi, K. C. Saraswat, and T. Kailath. November 1994. "Modeling, Identification, and Control of Rapid Thermal Processing Systems (Abstract)." <i>Journal of the Electrochemical Society</i> , vol. 141, no. 11, pp. 3200-3209.
LTUE	Tao, K. M., R. L. Kosut, M. Ekblad, and G. Aral. December 1994. "Feedforward Learning Applied to RTP of Semiconductor Wafers (Abstract)." <i>Proceedings of the 33rd IEEE Conference on Decision and Control</i> , vol. 1, pp. 67-72. Lake Buena Vista, Florida.
LTUE	Hu, Albert, He Du, Steve Wong, Peter Renteln, and Emmanuel Sachs. 1994. "Application of Run by Run Controller to the Chemical-Mechanical Planarization Process." <i>IEEE/CPMT International Electronics Manufacturing Technology Symposium</i> , pp. 371-378.
LTUE	Spanos, C. J., S. Leang, S.-Y. Ma, J. Thomson, B. Bombay, and X. Niu. May 1995. "A Multistep Supervisory Controller for Photolithographic Operations (Abstract)." <i>Proceedings of the Symposium on Process Control, Diagnostics, and Modeling in Semiconductor Manufacturing</i> , pp. 3-17.
LTUE	Leang, Sovarong, Shang-Yi Ma, John Thomson, Bart John Bombay, and Costas J. Spanos. May 1996. "A Control System for Photolithographic Sequences." <i>IEEE Transactions on Semiconductor Manufacturing</i> , vol. 9, no. 2.

EXAMINER

/Lynette Umez Eronini/

DATE CONSIDERED

(09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

RECEIVED
JUL 24 2003
GROUP 1700

INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION
(PTO-1449)



ATTY. DOCKET NO.
005918
USMPEPS/MMCS/APC

SERIAL NO.
09/943,955

RECEIVED

APR 28 2003

APPLICANT
SHANMUGASUNDRAM et al.

Technology Center 2100

FILING DATE
August 31, 2001

GROUP
2122

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

LTUE	Boning, Duane S., William P. Moyne, Taber H. Smith, James Moyne, Ronald Telfeyan, Arnon Hurwitz, Scott Shellman, and John Taylor. October 1996. "Run by Run Control of Chemical-Mechanical Polishing." <i>IEEE Transactions on Components, Packaging, and Manufacturing Technology—Part C</i> , vol. 19, no. 4, pp. 307-314.
LTUE	Zhe, Ning, J. R. Moyne, T. Smith, D. Boning, E. Del Castillo, Yeh Jinn-Yi, and Hurwitz. November 1996. "A Comparative Analysis of Run-to-Run Control Algorithms in Semiconductor Manufacturing Industry (Abstract)." <i>IEEE/SEMI 1996 Advanced Semiconductor Manufacturing Conference Workshop</i> , pp. 375-381.
LTUE	Yasuda, M., T. Osaka, and M. Ikeda. December 1996. "Feedforward Control of a Vibration Isolation System for Disturbance Suppression (Abstract)." <i>Proceeding of the 35th IEEE Conference on Decision and Control</i> , vol. 2, pp. 1229-1233. Kobe, Japan.
LTUE	Fan, Jr-Min, Ruey-Shan Guo, Shi-Chung Chang, and Kian-Huei Lee. 1996. "Abnormal Tred Detection of Sequence-Disordered Data Using EWMA Method." <i>IEEE/SEMI Advanced Semiconductor Manufacturing Conference</i> , pp. 169-174.
LTUE	Smith, Taber and Duane Boning. 1996. "A Self-Tuning EWMA Controller Utilizing Artificial Neural Network Function Approximation Techniques." <i>IEEE/CPMT International Electronics Manufacturing Technology Symposium</i> , pp. 355-363.
LTUE	Guo, Ruey-Shan, Li-Shia Huang, Argon Chen, and Jin-Jung Chen. October 1997. "A Cost-Effective Methodology for a Run-by-Run EWMA Controller." <i>6th International Symposium on Semiconductor Manufacturing</i> , pp. 61-64.
LTUE	Mullins, J. A., W. J. Campbell, and A. D. Stock. October 1997. "An Evaluation of Model Predictive Control in Run-to-Run Processing in Semiconductor Manufacturing (Abstract)." <i>Proceedings of the SPIE—The International Society for Optical Engineering Conference</i> , vol. 3213, pp. 182-189.
LTUE	Reitman, E. A., D. J. Friedman, and E. R. Lory. November 1997. "Pre-Production Results Demonstrating Multiple-System Models for Yield Analysis (Abstract)." <i>IEEE Transactions on Semiconductor Manufacturing</i> , vol. 10, no. 4, pp. 469-481.
LTUE	Durham, Jim and Myriam Roussel. 1997. "A Statistical Method for Correlating In-Line Defectivity to Probe Yield." <i>IEEE/SEMI Advanced Semiconductor Manufacturing Conference</i> , pp. 76-77.
LTUE	Shindo, Wataru, Eric H. Wang, Ram Akella, and Andrzej J. Strojwas. 1997. "Excursion Detection and Source Isolation in Defect Inspection and Classification." <i>2nd International Workshop on Statistical Metrology</i> , pp. 90-93.
LTUE	July 1998. "Active Controller: Utilizing Active Databases for Implementing Multistep Control of Semiconductor Manufacturing (Abstract)." <i>IEEE Transactions on Components, Packaging and Manufacturing Technology—Part C</i> , vol. 21, no. 3, pp. 217-224.
LTUE	Fang, S. J., A. Barda, T. Janecko, W. Little, D. Outley, G. Hempel, S. Joshi, B. Morrison, G. B. Shinn, and M. Birang. 1998. "Control of Dielectric Chemical Mechanical Polishing (CMP) Using and Interferometry Based Endpoint Sensor." <i>International Proceedings of the IEEE Interconnect Technology Conference</i> , pp. 76-78.

EXAMINER

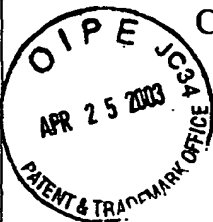
DATE CONSIDERED

/Lynette Umez Eronini (09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)		PATTY. DOCKET NO. 0578 USATEP/MCS/APC		SERIAL NO. 09/943,955
		RECEIVED APR 28 2003		APPLICANT SHANMUGASUNDRAM et al.
FILING DATE August 31, 2001		GROUP 2122		
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)				
LTUE	Ouma, Dennis, Duane Boning, James Chung, Greg Shinn, Leif Olsen, and John Clark. 1998. "An Integrated Characterization and Modeling Methodology for CMP Dielectric Planarization." <i>Proceedings of the IEEE 1998 International Interconnect Technology Conference</i> , pp. 67-69.			
LTUE	Boning, Duane S., Jerry Stefani, and Stephanie W. Butler. February 1999. "Statistical Methods for Semiconductor Manufacturing." <i>Encyclopedia of Electrical Engineering</i> , J. G. Webster, Ed.			
LTUE	McIntosh, John. March 1999. "Using CD-SEM Metrology in the Manufacture of Semiconductors (Abstract)." <i>JOM</i> , vol. 51, no. 3, pp. 38-39.			
LTUE	Pan, J. Tony, Ping Li, Kapila Wijekoon, Stan Tsai, and Fritz Redeker. May 1999. "Copper CMP Integration and Time Dependent Pattern Effect." <i>IEEE 1999 International Interconnect Technology Conference</i> , pp. 164-166.			
LTUE	Meckl, P. H. and K. Umemoto. August 1999. "Achieving Fast Motions in Semiconductor Manufacturing Machinery (Abstract)." <i>Proceedings of the 1999 IEEE International Conference on Control Applications</i> , vol. 1, pp. 725-729. Kohala Coast, HI.			
LTUE	Khan, K., C. El Chemali, J. Moyne, J. Chapple-Sokol, R. Nadeau, P. Smith, C., and T. Parikh. October 1999. "Yield Improvement at the Contact Process Through Run-to-Run Control (Abstract)." 24 th <i>IEEE/CPMT Electronics Manufacturing Technology Symposium</i> , pp. 258-263.			
LTUE	Ruegsegger, Steven, Aaron Wagner, James S. Freudenberg, and Dennis S. Grimard. November 1999. "Feedforward Control for Reduced Run-to-Run Variation in Microelectronics Manufacturing." <i>IEEE Transactions on Semiconductor Manufacturing</i> , vol. 12, no. 4.			
LTUE	November 1999. "How to Use EWMA to Achieve SPC and EPC Control." <i>International Symposium on NDT Contribution to the Infrastructure Safety Systems</i> , Torres, Brazil. http://www.ndt.net/abstract/ndtiss99/data/35.htm			
LTUE	Edgar, T. F., W. J. Campbell, and C. Bode. December 1999. "Model-Based Control in Microelectronics Manufacturing." <i>Proceedings of the 38th IEEE Conference on Decision and Control</i> , Phoenix, Arizona, vol. 4, pp. 4185-4191.			
LTUE	Meckl, P. H. and K. Umemoto. April 2000. "Achieving Fast Motions by Using Shaped Reference Inputs [Semiconductor Manufacturing Machine] (Abstract)." <i>NEC Research and Development</i> , vol. 41, no. 2, pp. 232-237.			
LTUE	Oechsner, R., T. Tschaftary, S. Sommer, L. Pfitzner, H. Ryssel, H. Gerath, C. Baier, and M. Hafner. September 2000. "Feed-forward Control for a Lithography/Etch Sequence (Abstract)." <i>Proceedings of the SPIE - The International Society for Optical Engineering Conference</i> , vol. 4182, pp. 31-39.			
LTUE	Cheung, Robin. October 18, 2000. "Copper Interconnect Technology." <i>AVS/CMP User Group Meeting</i> , Santa Clara, CA.			
LTUE	Edgar, Thomas F., Stephanie W. Butler, W. Jarrett Campbell, Carlos Pfeiffer, Christopher Bode, Sung Bo Hwang, K. S. Balakrishnan, and J. Hahn. November 2000. "Automatic Control in Microelectronics Manufacturing: Practices, Challenges, and Possibilities (Abstract)." <i>Automatica</i> , v. 36, n. 11.			
EXAMINER		/Lynette Umez Eronini/		
		DATE CONSIDERED (09/07/2006)		

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)		ATTY. DOCKET NO. 005918 MPPEPS/MMCS/APC	SERIAL NO. 09/943,955
		RECEIVED APR 28 2003	
		APPLICANT SHANMUGASUNDRAM et al. Technology Center 2100	
		FILING DATE August 31, 2001	GROUP 2122
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)			
LTUE	Khan, S., M. Musavi, and H. Ressim. November 2000. "Critical Dimension Control in Semiconductor Manufacturing (Abstract)." <i>ANNIE 2000. Smart Engineering Systems Design Conference</i> , pp. 995-1000. St. Louis, Missouri.		
LTUE	ACM Research Inc. 2000. "Advanced Copper Metallization for 0.13 to 0.05 μm & Beyond." http://acmrc.com/press/ACM-ECP-brochure.pdf		
LTUE	Ravid, Avi, Avner Sharon, Amit Weingarten, Vladimir Machavariani, and David Scheiner. 2000. "Copper CMP Planarity Control Using ITM." <i>IEEE/SEMI Advanced Semiconductor Manufacturing Conference</i> , pp. 437-443.		
LTUE	Chen, Argon and Ruey-Shan Guo. February 2001. "Age-Based Double EWMA Controller and Its Application to CMP Processes." <i>IEEE Transactions on Semiconductor Manufacturing</i> , vol. 14, no. 1, pp. 11-19.		
LTUE	Tobin, K. W., T. P. Karnowski, L. F. Arrowood, and F. Lakhani. April 2001. "Field Test Results of an Automated Image Retrieval System (Abstract)." <i>Advanced Semiconductor Manufacturing Conference, 2001 IEEE/SEMI</i> , Munich, Germany.		
LTUE	Tan, K. K., H. F. Dou, and K. Z. Tang. May-June 2001. "Precision Motion Control System for Ultra-Precision Semiconductor and Electronic Components Manufacturing (Abstract)." <i>51st Electronic Components and Technology Conference 2001. Proceedings</i> , pp. 1372-1379. Orlando, Florida.		
LTUE	Heuberger, U. September 2001. "Coating Thickness Measurement with Dual-Function Eddy-Current & Magnetic Inductance Instrument (Abstract)." <i>Galvanotechnik</i> , vol. 92, no. 9, pp. 2354-2366+IV.		
LTUE	Wang, LiRen and Hefin Rowlands. 2001. "A Novel NN-Fuzzy-SPC Feedback Control System." <i>8th IEEE International Conference on Emerging Technologies and Factory Automation</i> , pp. 417-423.		
LTUE	Moyne, J., V. Solakhian, A. Yershov, M. Anderson, and D. Mockler-Hebert. April-May 2002. "Development and Deployment of a Multi-Component Advanced Process Control System for an Epitaxy Tool (Abstract)." <i>2002 IEEE Advanced Semiconductor Manufacturing Conference and Workshop</i> , pp. 125-130.		
LTUE	Sarfaty, M., A. Shanmugasundram, A. Schwarm, J. Paik, Jimin Zhang, Rong Pan, M. J. Seamons, H. Li, R. Hung, and S. Parikh. April-May 2002. "Advance Process Control Solutions for Semiconductor Manufacturing (Abstract)." <i>13th Annual IEEE/SEMI Advanced Semiconductor Manufacturing Conference. Advancing the Science and Technology of Semiconductor Manufacturing. ASMC 2002</i> , pp. 101-106. Boston, MA.		
LTUE	Campbell, W. J., S. K. Firth, A. J. Toprac, and T. F. Edgar. May 2002. "A Comparison of Run-to-Run Control Algorithms (Abstract)." <i>Proceedings of 2002 American Control Conference</i> , vol. 3, pp. 2150-2155.		
LTUE	Good, Richard and S. Joe Qin. May 2002. "Stability Analysis of Double EWMA Run-to-Run Control with Metrology Delay." <i>IEEE/CPMT International Electronics Manufacturing Technology Symposium</i> , pp. 355-363.		
EXAMINER	/Lynette Umez Eronini/		DATE CONSIDERED (09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

RECEIVED
 JUL 8 0 2003
 GROUP 1700

RECEIVED
JUL 18 2003
GROUP 1700

INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)				ATTY. DOCKET NO. 005918 USA/FPS/MMCS/APC		SERIAL NO. 09/943,955 RECEIVED JUL 07 2003	
				APPLICANT SHANMUGASUNDRAM et al.		Technology Center 2100 et al.	
				FILING DATE August 31, 2001		GROUP 2122	
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
LTUE	3,767,900	10/23/73	Chao et al.			06/23/71	
LTUE	3,920,965	11/18/75	Sohrwardy			03/04/74	
LTUE	4,368,510	01/11/83	Anderson			10/20/80	
LTUE	4,616,308	10/07/86	Morshedi et al.			12/02/85	
LTUE	4,663,703	05/05/87	Axelby et al.			10/02/85	
LTUE	5,347,446	09/13/94	Iino et al.			02/10/92	
LTUE	5,519,605	05/21/96	Cawfield			10/24/94	
LTUE	6,128,016	10/03/00	Coelho et al.			12/20/96	
LTUE	6,219,711	04/17/01	Chari			10/01/97	
LTUE	6,249,712	06/19/01	Boiquaye			09/25/96	
LTUE	6,278,899	08/21/01	Piche et al.			10/06/98	
LTUE	2001/0039462	11/08/01	Mendez et al.			04/02/01	
LTUE	2001/0040997	11/15/01	Tsap et al.			05/15/01	
LTUE	2002/0128805	09/12/02	Goldman et al.			12/26/00	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
LTUE	EP 1 067 757	01/10/01	Europe			X	
LTUE	WO 01/33277	05/10/01	WO			X	
LTUE	WO 02/31613 A2	04/18/02	WO			X	
LTUE	WO 02/31613 A3	04/18/02	WO			X	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
LTUE	Levine, Martin D. 1985. <i>Vision in Man and Machine</i> . New York: McGraw-Hill, Inc. pp. ix-xii, 1-58.						
LTUE	Pilu, Maurizio. September 2001. "Undoing Page Curl Distortion Using Applicable Surfaces." <i>IEEE International Conference on Image Processing</i> . Thessalonica, Greece.						
LTUE	23 May 2003. Written Opinion for PCT/US01/24910.						
EXAMINER				DATE CONSIDERED			
/Lynette Umez Eronini/				(09/07/2006)			

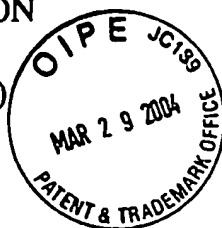
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)				ATTY. DOCKET NO. 005918 USA/FPS/MMCS/APC		SERIAL NO. 09/943,955	
				APPLICANT SHANMUGASUNDRAM et al.			
				FILING DATE August 31, 2001		GROUP 2122	
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
LTUE	5,901,313	05/04/99	Wolf et al.			09/02/97	
LTUE	6,002,989	12/14/99	Shiba et al.			04/01/97	
LTUE	6,094,688	07/25/00	Mellen-Garnett et al.			03/12/98	
LTUE	6,340,602	01/22/02	Johnson et al.			02/12/01	
LTUE	6,345,288	02/05/02	Reed et al.			05/15/00	
LTUE	6,368,879	04/09/02	Toprac			09/22/99	
LTUE	US-2002/0107604	08/08/02	Riley et al.			12/06/00	
LTUE	6,470,230	10/22/02	Toprac et al.			01/04/00	
LTUE	6,482,660	11/19/02	Conchieri et al.			03/19/01	
LTUE	6,567,717	05/20/03	Krivokapic et al.			01/19/00	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
LTUE	WO 99/59200	11/18/99	WIPO			X	
LTUE	WO 01/52319	07/19/01	WIPO			X	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
LTUE	Williams, Randy, Dadi Gudmundsson, Kevin Monahan, Raman Nurani, Meryl Stoller and J. George Shanthikumar. October 1999. "Optimized Sample Planning for Wafer Defect Inspection," <i>Semiconductor Manufacturing Conference Proceedings, 1999 IEEE International Symposium on Santa Clara, CA</i> . Piscataway, NJ. pp. 43 - 46.						
LTUE	23 July 2003. Invitation to Pay Additional Fees and Communication Relating to the Results of the Partial International Search for PCT/US02/19116.						
LTUE	01 August 2003. Written Opinion for PCT/US01/27406.						
LTUE	20 August 2003. Written Opinion for PCT/US01/22833.						
EXAMINER /Lynette Umez Eronini/				DATE CONSIDERED (09/07/2006)			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

**INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION**

(PTO-1449)



ATTY. DOCKET NO.
005918
USA/FPS/MMCS/APC

SERIAL NO.
09/943,955

APPLICANT
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

GROUP
1765

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
LTUE	4,901,218	02/13/90	Cornwell			03/04/88
LTUE	5,427,878	06/27/95	Corliss			05/16/94
LTUE	5,761,065	06/02/98	Kittler et al.			03/30/95
LTUE	5,862,054	01/19/99	Li			02/20/97
LTUE	5,912,678	06/15/99	Saxena et al.			04/14/97
LTUE	5,926,690	07/20/99	Toprac et al.			05/28/97
LTUE	6,074,443	06/13/00	Venkatesh et al.			01/29/98
LTUE	6,111,634	08/29/00	Pecen et al.			05/28/97
LTUE	6,150,664	11/21/00	Su			06/29/99
LTUE	6,245,581 B1	06/12/01	Bonser et al.			04/19/00
LTUE	2001/0044667 A1	11/22/01	Nakano et al.			05/16/01
LTUE	6,346,426 B1	02/12/02	Toprac et al.			11/17/00
LTUE	6,363,294 B1	03/26/02	Coronel et al.			12/29/98
LTUE	6,442,496 B1	08/27/02	Pasadyn et al.			08/08/00
LTUE	6,486,492 B1	11/26/02	Su			11/20/00
LTUE	6,492,281 B1	12/10/02	Song et al.			09/22/00
LTUE	6,540,591 B1	04/01/03	Pasadyn et al.			04/18/01
LTUE	6,560,504 B1	05/06/03	Goodwin et al.			09/29/99
LTUE	6,590,179 B2	07/08/03	Tanaka et al.			02/26/01
LTUE	6,604,012 B1	08/05/03	Cho et al.			08/23/00
LTUE	6,618,692 B2	09/09/03	Takahashi et al.			02/26/01
LTUE	6,625,497 B2	09/23/03	Fairbairn et al.			07/10/01
LTUE	6,640,151 B1	10/28/03	Somekh et al.			12/22/99

EXAMINER

DATE CONSIDERED

/Lynette Umez Eronini/ (09/07/2006)


EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)				ATTY. DOCKET NO. 005918 USA/FPS/MMCS/APC		SERIAL NO. 09/943,955			
				APPLICANT SHANMUGASUNDRAM et al.				FILING DATE August 31, 2001	
FOREIGN PATENT DOCUMENTS									
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation			
						Yes	No		
LTUE	0 397 924 A1	11/22/90	Europe			X			
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)									
LTUE	Rocha, Joao and Carlos Ramos. September 12, 1994. "Task Planning for Flexible and Agile Manufacturing Systems." <i>Intelligent Robots and Systems '94. Advanced Robotic Systems and the Real World, IROS '94. Proceedings of the IEEE/RSJ/GI International Conference on Munich, Germany 12-16 Sept. 1994.</i> New York, New York: IEEE. pp. 105-112.								
LTUE	March 15, 2002. Office Action for U.S. Serial No. 09/469,227, filed December 22, 1999.								
LTUE	March 29, 2002. Office Action for U.S. Serial No. 09/363,966, filed July 29, 1999.								
LTUE	June 20, 2002. Office Action for U.S. Serial No. 09/619,044, filed July 19, 2000.								
LTUE	September 26, 2002. Office Action for U.S. Serial No. 09/637,620, filed August 11, 2000.								
LTUE	October 23, 2002. Office Action for U.S. Serial No. 09/469,227, filed December 22, 1999.								
LTUE	December 17, 2002. Office Action for U.S. Serial No. 09/363,966, filed July 29, 1999.								
LTUE	February 10, 2003. Office Action for U.S. Serial No. 09/619,044, filed July 19, 2000.								
LTUE	April 9, 2003. Office Action for U.S. Serial No. 09/928,474, filed August 14, 2001.								
LTUE	May 8, 2003. Office Action for U.S. Serial No. 09/637,620, filed August 11, 2000.								
LTUE	June 18, 2003. Office Action for U.S. Serial No. 09/655,542, filed September 6, 2000.								
LTUE	August 8, 2003. International Search Report for PCT/US03/08513.								
LTUE	August 25, 2003. Office Action for U.S. Serial No. 10/100,184, filed March 19, 2002.								
LTUE	September 15, 2003. Office Action for U.S. Serial No. 09/928,474, filed August 14, 2001.								
LTUE	November 5, 2003. Office Action for U.S. Serial No. 10/172,977, filed June 18, 2002.								
LTUE	December 1, 2003. Office Action for U.S. Serial No. 10/173,108, filed June 18, 2002.								
LTUE	December 11, 2003. Office Action for U.S. Serial No. 09/943,383, filed August 31, 2001.								
LTUE	December 16, 2003. International Search Report for PCT/US03/23964.								
LTUE	January 20, 2004. Office Action for U.S. Serial No. 09/927,444, filed August 13, 2001.								
LTUE	January 23, 2004. International Search Report for PCT/US02/24860.								
LTUE	February 2, 2004. Office Action for U.S. Serial No. 09/363,966, filed July 29, 1999.								
EXAMINER				DATE CONSIDERED					
/Lynette Umez Eronini/				(09/07/2006)					

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)				ATTY. DOCKET NO. 005918 USA/ FPS/MMCS/APC		SERIAL NO. 09/943,955	
				APPLICANT SHANMUGASUNDRAM et al.			
				FILING DATE August 31, 2001		GROUP 1765	
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
LTUE	4,957,605	09/18/90	Hurwitt et al.			04/17/89	
LTUE	5,369,544	11/29/94	Mastrangelo			04/05/93	
LTUE	5,444,837	08/22/95	Bomans et al.			12/29/93	
LTUE	5,665,214	09/09/97	Iturralde			05/03/95	
LTUE	5,695,810	12/09/97	Dubin et al.			11/20/96	
LTUE	5,824,599	10/20/98	Schacham-Diamond et al.			01/16/96	
LTUE	5,825,356	10/20/98	Habib et al.			03/18/96	
LTUE	5,831,851	11/03/98	Eastburn et al.			03/21/95	
LTUE	5,838,951	11/17/98	Song			08/28/96	
LTUE	5,859,777	01/12/99	Yokoyama et al.			05/13/97	
LTUE	5,871,805	02/16/99	Lemelson			04/08/96	
LTUE	5,943,550	08/24/99	Fulford, Jr. et al.			03/29/96	
LTUE	6,012,048	01/04/00	Gustin et al.			05/30/97	
LTUE	6,037,664	03/14/00	Zhao et al.			03/31/98	
LTUE	6,059,636	05/09/00	Inaba et al.			07/09/98	
LTUE	6,096,649	08/01/00	Jang			10/25/99	
LTUE	6,100,195	08/08/00	Chan et al.			12/28/98	
LTUE	6,114,238	09/05/00	Liao			05/20/98	
LTUE	6,150,270	11/21/00	Matsuda et al.			01/07/99	
LTUE	6,157,864	12/05/00	Schwenke et al.			05/08/98	
LTUE	6,181,013 B1	01/30/01	Liu et al.			03/13/00	
LTUE	6,212,961 B1	04/10/01	Dvir			02/11/99	
LTUE	6,226,563 B1	05/01/01	Lim			09/04/98	
LTUE	6,237,050 B1	05/22/01	Kim et al.			09/04/98	
LTUE	2001/0006873 A1	07/05/01	Moore			02/13/01	
LTUE	6,259,160 B1	07/10/01	Lopatin et al.			04/21/99	
LTUE	6,281,127 B1	08/28/01	Shue			04/15/99	
EXAMINER			DATE CONSIDERED				
/Lynette Umez Eronini/			(09/07/2006)				

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)				ATTY. DOCKET NO. 005918 USA/ FPS/MMCS/APC		SERIAL NO. 09/943,955	
				APPLICANT SHANMUGASUNDRAM et al.			
				FILING DATE August 31, 2001		GROUP 1765	
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
LTUE	6,317,643 B1	11/13/01	Dmochowski			03/31/99	
LTUE	6,339,727 B1	01/15/02	Ladd			12/21/98	
LTUE	6,355,559 B1	03/12/02	Havemann et al.			11/03/00	
LTUE	6,391,780 B1	05/21/02	Shih et al.			08/23/99	
LTUE	6,417,014 B1	07/09/02	Lam et al.			10/19/99	
LTUE	6,427,093 B1	07/30/02	Toprac			10/07/99	
LTUE	6,449,524 B1	09/10/02	Miller et al.			01/04/00	
LTUE	6,455,415 B1	09/24/02	Lopatin et al.			04/16/01	
LTUE	2002/0165636 A1	11/07/02	Hasan			04/24/02	
LTUE	6,484,064 B1	11/19/02	Campbell			10/05/99	
LTUE	6,495,452 B1	12/17/02	Shih			08/18/99	
LTUE	2002/0193899 A1	12/19/02	Shanmugasundram et al.			05/01/02	
LTUE	2003/0017256 A1	01/23/03	Shimane			06/12/02	
LTUE	6,515,368 B1	02/04/03	Lopatin et al.			12/07/01	
LTUE	6,517,414 B1	02/11/03	Tobin et al.			03/10/00	
LTUE	6,528,409 B1	03/04/03	Lopatin et al.			04/29/02	
LTUE	6,537,912 B1	03/25/03	Agarwal			08/25/00	
LTUE	6,580,958 B1	06/17/03	Takano			11/22/99	
LTUE	6,605,549 B2	08/12/03	Leu et al.			09/29/01	
LTUE	6,607,976 B2	08/19/03	Chen et al.			09/25/01	
LTUE	6,616,513 B1	09/09/03	Osterheld			04/05/01	
LTUE	6,624,075 B1	09/23/03	Lopatin et al.			11/05/02	
LTUE	6,630,741 B1	10/07/03	Lopatin et al.			12/07/01	
LTUE	6,660,633 B1	12/09/03	Lopatin et al.			02/26/02	
LTUE	6,708,074 B1	03/16/04	Chi et al.			08/11/00	
LTUE	6,708,075 B2	03/16/04	Sonderman et al.			11/16/01	
LTUE	6,728,587 B2	04/27/04	Goldman et al.			12/27/00	
EXAMINER			DATE CONSIDERED				
/Lynette Umez Eronini/			(09/07/2006)				

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)				ATTY. DOCKET NO. 005918 USA/ FPS/MMCS/APC		SERIAL NO. 09/943,955	
				APPLICANT SHANMUGASUNDRAM et al.			
				FILING DATE August 31, 2001		GROUP 1765	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
LTUE	EP 0 932 195 A1	07/28/99	EP			X	
LTUE	EP 1 083 470 A2	03/14/01	EP			X	
LTUE	GB 2 365 215 A	02/13/02	GB			X	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
LTUE	Sun, S.C. 1998. "CVD and PVD Transition Metal Nitrides as Diffusion Barriers for Cu Metallization." <i>IEEE</i> . pp. 243-246.						
LTUE	Tagami, M., A. Furuya, T. Onodera, and Y. Hayashi. 1999. "Layered Ta-nitrides (LTN) Barrier Film by Power Swing Sputtering (PSS) Technique for MOCVD-Cu Damascene Interconnects." <i>IEEE</i> . pp. 635-638.						
LTUE	Yamagishi, H., Z. Tokei, G.P. Beyer, R. Donaton, H. Bender, T. Nogami, and K. Maex. 2000. "TEM/SEM Investigation and Electrical Evaluation of a Bottomless I-PVD TA(N) Barrier in Dual Damascene" (Abstract). <i>Advanced Metallization Conference 2000</i> . San Diego, CA.						
LTUE	Eisenbraun, Eric, Oscar van der Straten, Yu Zhu, Katharine Dovidenko, and Alain Kaloyeros. 2001. "Atomic Layer Deposition (ALD) of Tantalum-Based Materials for Zero Thickness Copper Barrier Applications" (Abstract). <i>IEEE</i> . pp. 207-209.						
LTUE	Smith, S.R., K.E. Elers, T. Jacobs, V. Blaschke, and K. Pfeifer. 2001. "Physical and Electrical Characterization of ALD Tin Used as a Copper Diffusion Barrier in 0.25 mum, Dual Damascene Backend Structures" (Abstract). <i>Advanced Metallization Conference 2001</i> . Montreal, Quebec.						
LTUE	Kim, Y.T. and H. Sim. 2002. "Characteristics of Pulse Plasma Enhanced Atomic Layer Deposition of Tungsten Nitride Diffusion Barrier for Copper Interconnect" (Abstract). <i>IEIC Technical Report</i> . Vol. 102, No. 178, pp. 115-118.						
LTUE	Elers, Kai-Erik, Ville Saanila, Pekka J. Soininen, Wei-Min Li, Juhana T. Kostamo, Suvi Haukka, Jyrki Juhanoja, and Wim F.A. Besling. 2002. "Diffusion Barrier Deposition on a Copper Surface by Atomic Layer Deposition" (Abstract). <i>Advanced Materials</i> . Vol. 14, No. 13-14, pp. 149-153.						
LTUE	Peng, C.H., C.H. Hsieh, C.L. Huang, J.C. Lin, M.H. Tsai, M.W. Lin, C.L. Chang, Winston S. Shue, and M.S. Liang. 2002. "A 90nm Generation Copper Dual Damascene Technology with ALD TaN Barrier." <i>IEEE</i> . pp. 603-606.						
LTUE	Van der Straten, O., Y. Zhu, E. Eisenbraun, and A. Kaloyeros. 2002. "Thermal and Electrical Barrier Performance Testing of Ultrathin Atomic Layer Deposition Tantalum-Based Materials for Nanoscale Copper Metallization." <i>IEEE</i> . pp. 188-190.						
LTUE	Wu, Z.C., Y.C. Lu, C.C. Chiang, M.C. Chen, B.T. Chen, G.J. Wang, Y.T. Chen, J.L. Huang, S.M. Jang, and M.S. Liang. 2002. "Advanced Metal Barrier Free Cu Damascene Interconnects with PECVD Silicon Carbide Barriers for 90/65-nm BEOL Technology." <i>IEEE</i> . pp. 595-598.						
LTUE	July 25, 2003. International Search Report for PCT/US02/24858.						
LTUE	March 30, 2004. Written Opinion for PCT/US02/19062.						
LTUE	April 9, 2004. Written Opinion for PCT/US02/19116.						
LTUE	April 22, 2004. Office Action for U.S. Serial No. 09/998,372, filed November 30, 2001.						
EXAMINER				DATE CONSIDERED			
/Lynette Umez Eronini/				(09/07/2006)			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

**INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION
(PTO-1449)**

ATTY. DOCKET NO.
005918 USA/
FPS/MMCS/APC

SERIAL NO.
09/943,955

APPLICANT
SHANMUGASUNDRAM et al.

FILING DATE
August 31, 2001

**GROUP
1765**

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

LTUE	April 28, 2004. Written Opinion for PCT/US02/19117.
LTUE	April 29, 2004. Written Opinion for PCT/US02/19061.
LTUE	May 5, 2004. International Preliminary Examination Report for PCT/US01/27406.
LTUE	May 28, 2004. Office Action for U.S. Serial No. 09/943,383, filed August 31, 2001.
LTUE	June 3, 2004. Office Action for U.S. Serial No. 09/928,474, filed August 14, 2001.
LTUE	June 23, 2004. Office Action for U.S. Serial No. 10/686,589, filed October 17, 2003.
LTUE	June 30, 2004. Office Action for U.S. Serial No. 09/800,980, filed March 8, 2001.
LTUE	July 12, 2004. Office Action for U.S. Serial No. 10/173,108, filed June 8, 2002.

EXAMINER

/Lynette Umez Eronini/ (09/07/2006)

DATE CONSIDERED

(09/07/2006)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)				ATTY. DOCKET NO. 005918 USA/FPS/MMCS/APC		SERIAL NO. 09/943,955 RECEIVED DEC 19 2003 Technology Center 2100	
				APPLICANT SHANMUGASUNDRAM et al.			
FILING DATE August 31, 2001				GROUP 2122			
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
L.T.M.E.	4,207,520	06/10/80	Flora et al.	324	238	04/06/78	
L.T.M.E.	4,209,744	06/24/80	Gerasimov et al.	324	241	03/27/78	
L.T.M.E.	4,609,870	09/02/86	Lale et al.	324	225	09/13/84	
L.T.M.E.	4,755,753	07/05/88	Chern	324	237	07/23/86	
L.T.M.E.	5,427,878	06/27/95	Corliss	430	30	05/16/94	
L.T.M.E.	5,534,289	07/09/96	Bilder et al.	427	8	01/03/95	
L.T.M.E.	5,867,389	02/02/99	Hamada et al.	700	121	11/26/96	
L.T.M.E.	6,041,263	03/21/00	Boston et al.	700	32	10/01/97	
L.T.M.E.	6,077,412	06/20/00	Ting et al.	205	143	10/30/98	
L.T.M.E.	6,271,670	08/07/01	Caffey	324	642	02/08/99	
L.T.M.E.	6,400,162	06/04/02	Mallory et al.	324	688	07/21/00	
L.T.M.E.	US 2002/0077031	06/20/02	Johansson et al.	451	6	07/06/01	
L.T.M.E.	6,442,496	08/27/02	Pasady et al.	702	83	08/08/00	
L.T.M.E.	6,563,308	05/13/03	Nagano et al.	324	230	03/27/01	
L.T.M.E.	6,587,744	07/01/03	Stoddard et al.	700	121	06/20/00	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
L.T.M.E.	WO 01/11679	02/15/01	WIPO	—	—	X	
L.T.M.E.	WO 01/080306	10/25/01	WIPO	—	—	X	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
L.T.M.E.	Miller, G. L., D. A. H. Robinson, and J. D. Wiley. July 1976. "Contactless measurement of semiconductor conductivity by radio frequency-free-carrier power absorption." Rev. Sci. Instrum., Volume 47, No. 7. pp. 799 - 805.						
L.T.M.E.	1999. "Contactless Bulk Resistivity/Sheet Resistance Measurement and Mapping Systems." www.Lehighton.com/fabtech1/index.html .						
L.T.M.E.	2000. "Microsense II Capacitance Gaging System." www.adetech.com .						
EXAMINER <i>Lynette J. Wang-Evanni</i>				DATE CONSIDERED <i>5/2/2004</i>			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)		ATTY. DOCKET NO. 005918 USA/FPS/MMCS/APC		SERIAL NO. 09/943,955 RECEIVED DEC 19 2003 Technology Center 2100	
		APPLICANT SHANMUGASUNDRAM et al.			
		FILING DATE August 31, 2001		GROUP 2122	
FOREIGN PATENT DOCUMENTS					
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS Translation Yes No
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)					
LJM-E	El Chemali, Chadi et al. July/August 2000. "Multizone uniformity control of a chemical mechanical polishing process utilizing a pre- and postmeasurement strategy." <i>J. Vac. Sci. Technol.</i> Volume 18, No. 4. pp. 1287 - 1296.				
LJM-E	March 5, 2001. "KLA-Tencor Introduces First Production-worthy Copper CMP In-situ Film Thickness and End-point Control System." http://www.kla-tencor.com/j/servlet/NewsItem?newsItemID=74 .				
LJM-E	2002. "Microsense II - 5810: Non-Contact Capacitance Gaging Module." www.adetech.com .				
LJM-E	08 August 2003. PCT International Search Report from PCT/US03/08513.				
LJM-E	14 October 2003. PCT International Search Report from PCT/US02/21942.				
LJM-E	20 October 2003. PCT International Search Report from PCT/US02/19116.				
LJM-E	23 October 2003. PCT International Preliminary Examination Report from PCT/US01/24910.				
LJM-E	"NanoMapper wafer nanotopography measurement by ADE Phase Shift." http://www.phase-shift.com/nanomap.shtml . <i>no date</i>				
LJM-E	"Wafer flatness measurement of advanced wafers." http://www.phase-shift.com/wafer-flatness.shtml . <i>no date</i>				
LJM-E	"ADE Technologies, Inc. - 6360." http://www.adetech.com/6360.shtml . <i>no date</i>				
LJM-E	"3D optical profilometer MicroXAM by ADE Phase Shift." http://www.phase-shift.com/microxam.shtml . <i>no date</i>				
LJM-E	"NanoMapper FA factory automation wafer nanotopography measurement." http://www.phase-shift.com/nanomapperfa.shtml . <i>no date</i>				
EXAMINER Lynette J. Gomez-Evuni			DATE CONSIDERED 5/2/2004		

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

